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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/669,916	09/25/2000	Mitsuaki Oshima	2000_1326	2601

7590 08/28/2002

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EXAMINER

LE, AMANDA T

ART UNIT	PAPER NUMBER
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2634

DATE MAILED: 08/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/669,916

Applicant(s)

OSHIMA ET AL.

Examiner

Amanda T Le

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 08/240,521.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4, 5, 8, 10. 6) ☐ Other: _____

Drawings

1. Although Applicants have requested to transfer the drawings from the parent application, similar requests have been made in all the other co-pending applications. The drawings will be transferred only to the reissue application serial no. 09/244.037. Formal drawings will be required for this Application.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 13, 14, 16, 17 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claimed limitations of "an allocator operable to allocate code points along a uniaxial modulation coordinate system, and a filter, having a plurality of coefficients which are a series of impulse responses defined by plotting time base responses to the VSB modulation signal...along the uniaxial modulation coordination system" is not described expressively in the specification. The support for the claimed limitations in the specification (col. 48, lines 31-44, and 31-44, col. 52, lines 56-65, and Figs. 61, 62, 159), as indicated by the Applicants, simply discloses "a modulator" and "a VSB filter".

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 13, 14, 16, 17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 2 of U.S. Patent No. 5,600,672 in view of Chung et al.

The patented claim discloses all the claimed limitations, except for "modulate the first data stream and the second data stream, such that the number of signal points of the first data stream in a signal space is different from the number of signal points of the second data stream in the signal space". Chung et al discloses a modulation/demodulation system (Fig. 1, 2) wherein the modulator/demodulator modulates/demodulates two different data streams being mapped by mappers having different signal point constellations. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system disclosed in the patented claim using Chung et al's teachings. Such modifications result in an improved communications system in which different levels of protection can be provided to different "classes" of transmitted signals as desired.

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6. Claims 15-18 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 13-18 of co pending Application No. 09/666,012, 09/667,525, 09/668,068, 09/672,948, 09/672,947 in view of Chung et al.

The patented claim disclose all the subject matters, except for "an error correction encoder/decoder". Chung et al discloses modulation/demodulation system (Fig. 1, 2) wherein a plurality of data streams are trellis encoded (col. 5, lines 55-58) before being mapped by different mappers. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize Chung et al's channel encoders in the system of the patented claim for the purpose of providing error protections to the transmitted data stream.

Further, omission a particular feature whose functions are not needed for the design requirements would have been obvious to one of ordinary skill in the art at the time of the invention.

6. Claims 15-18 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 13-18 of co pending Application No. 09/672,946.

The patented claim and the claim at issue differ only in that the patented claim further recites that "the first data stream has data for demodulation including information representing the number of signal points of the second data stream and the number of signal points of the first data stream is equal to or less than 4". Nonetheless, omission of a particular feature whose functions are not needed for the design requirements would have been obvious to one of ordinary skill in the art at the time of the invention.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chung et al.

Chung et al discloses a receiver (fig. 2) comprising the following claimed limitations: "first data stream" (80), "second data stream" (70), "error correction decoder" (331, 332), "demodulator" (350, 340, 332, 331). Chung et al fails to explicitly teach the received signals are "VSB modulation signal" as claimed. Nonetheless, Chung et al suggests that other modulation schemes can also be used by modifying the channel coder/decoder or modulator/demodulator appropriately (see col. 6, line 62-col. 7, line 32). Further, VSB is a well known modulation scheme at the time of the invention. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Chung et al's communications system to

modulate, and thereby demodulating, signals using VSB modulation scheme when it is necessary.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Amanda Le** whose telephone number is **(703)305-4769**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Stephen Chin**, can be reached at (703)305-4714.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



**AMANDA T. LE
PRIMARY EXAMINER**